

JVC



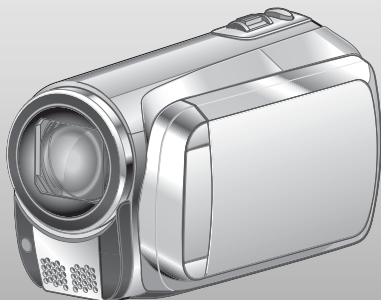
LYT2019-001A-M

INSTRUCTIONS

MANUAL DE INSTRUCCIONES

EN**SP**

MEMORY CAMERA VIDEOCÁMARA CON MEMORIA GZ-MS130U



Please read the instruction manual prior to connecting or operating this product.

Por favor, lea el manual de instrucciones antes de conectar u operar este producto.

For more details on the operations, refer to the GUIDEBOOK in the supplied CD-ROM.



Para obtener más información sobre las operaciones, consulte la GUÍA incluida en el CD-ROM suministrado.



Dear Customer

Thank you for purchasing this memory camera. Before use, please read the safety information and precautions contained in pages 2 and 3 to ensure safe use of this product.

For Future Reference:

Enter the Model No. (located on the bottom of the memory camera) and Serial No. (located on the battery pack mount of the camcorder) below.

Model No. _____

Serial No. _____

Apreciado cliente

Muchas gracias por haber adquirido esta videocámara con memoria. Antes de usarla, lea la información de seguridad y las precauciones contenidas en las paginas 2 y 3 para garantizar un uso seguro de este producto.

Para futuras consultas:

Escriba a continuación el número de modelo (ubicado en la parte inferior de la videocámara) y el número de serie (ubicado en el compartimiento de la batería de la videocámara).

Número de modelo

Número de serie



ENGLISH ESPAÑOL

Safety Precautions



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

NOTES:

- The rating plate and safety caution are on the bottom and/or the back of the main unit.
- The serial number plate is on the battery pack mount.
- The rating information and safety caution of the AC adapter are on its upper and lower sides.

For USA-California Only

This product contains a CR Coin Cell Lithium Battery which contains Perchlorate Material – special handling may apply.

See www.dtsc.ca.gov/hazardouswaste/perchlorate

Caution on Replaceable lithium battery

The battery used in this device may present a fire or chemical burn hazard if mistreated. Do not recharge, disassemble, heat above 100°C or incinerate.

Replace battery with Panasonic (Matsushita Electric), Sanyo, Sony or Maxell CR2025. Danger of explosion or Risk of fire if the battery is incorrectly replaced.

- Dispose of used battery promptly.
- Keep away from children.
- Do not disassemble and do not dispose of in fire.

When the equipment is installed in a cabinet or on a shelf, make sure that it has sufficient space on all sides to allow for ventilation (10 cm (3-15/16") or more on both sides, on top and at the rear). Do not block the ventilation holes.

(If the ventilation holes are blocked by a newspaper, or cloth etc. the heat may not be able to get out.)

No naked flame sources, such as lighted candles, should be placed on the apparatus.

When discarding batteries, environmental problems must be considered and the local rules or laws governing the disposal of these batteries must be followed strictly.

The apparatus shall not be exposed to dripping or splashing.

Do not use this equipment in a bathroom or places with water.

Also do not place any containers filled with water or liquids (such as cosmetics or medicines, flower vases, potted plants, cups etc.) on top of this unit. (If water or liquid is allowed to enter this equipment, fire or electric shock may be caused.)

Do not point the lens directly into the sun. This can cause eye injuries, as well as lead to the malfunctioning of internal circuitry. There is also a risk of fire or electric shock.

CAUTION!

The following notes concern possible physical damage to the camcorder and to the user.

Carrying or holding the camcorder by the LCD monitor can result in dropping the unit, or in a malfunction.

Do not use a tripod on unsteady or uneven surfaces. It could tip over, causing serious damage to the camcorder.

CAUTION!

Connecting cables (Audio/Video, S-Video, etc.) to the camcorder and leaving it on top of the TV is not recommended, as tripping on the cables will cause the camcorder to fall, resulting in damage.

CAUTION:

The mains plug shall remain readily operable.

WARNING:

Batteries, including lithium batteries installed in the camcorder and the remote control, should not be exposed to excessive heat such as direct sunshine, fire or the like.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Only use attachments/accessories specified by the manufacturer.
10. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
11. Unplug this apparatus during lightning storms or when unused for long periods of time.
12. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



Remember that this camcorder is intended for private consumer use only.

Any commercial use without proper permission is prohibited. (Even if you record an event such as a show, performance or exhibition for personal enjoyment, it is strongly recommended that you obtain permission beforehand.)

Trademarks

- Manufactured under license from Dolby Laboratories. Dolby and double-D symbol are trademarks of Dolby Laboratories.
- Windows® is either a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries.
- Macintosh is a registered trademark of Apple Inc.
- YouTube and the YouTube logo are trademarks and/or registered trademarks of YouTube LLC.
- iTunes is a trademark of Apple Inc., registered in the U. S. and other countries.
- Other product and company names included in this instruction manual are trademarks and/or registered trademarks of their respective holders.



If this symbol is shown, it is only valid in the European Union.

Charge the battery before recording

Turn off the camcorder and attach the battery pack.

Access lamp

Blinks: Accessing files

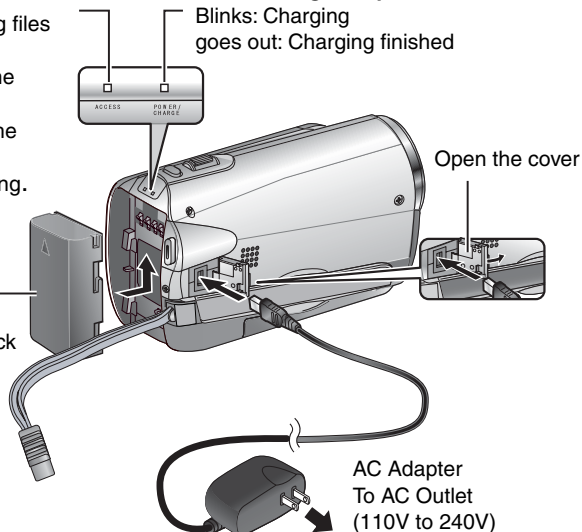
Do not remove the AC adapter, the battery pack or the SD card when the lamp is blinking.

Power/charge lamp

Blinks: Charging
goes out: Charging finished

Battery Pack

The battery pack is not charged at the time of purchase.



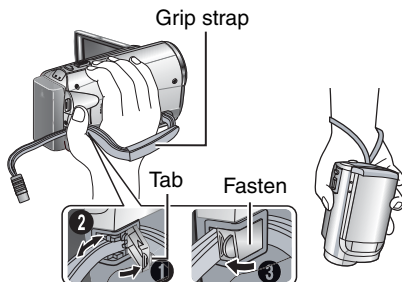
CAUTION

Be sure to use JVC battery packs. If you use any other battery packs besides JVC battery packs, safety and performance can not be guaranteed.

Grip Adjustment

Adjust the strap and fasten.

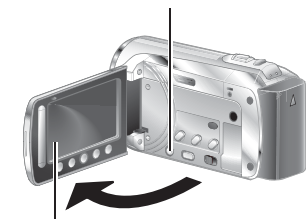
- Do not pull the strap when you open the fasten. Please use the tab to open it.
- Fasten the strap when you grip the camcorder.
- When carrying the camcorder, please be careful not to drop it.



Date/Time Setting

1 Open the LCD monitor to turn on the camcorder

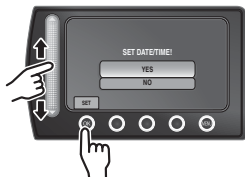
Power Button



LCD monitor

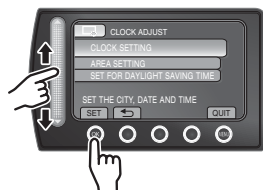
2 Select [YES] within 10 seconds

Slide your finger up and down on the sensor. Then touch **OK**.

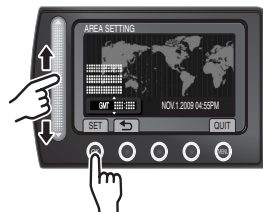


- When the message disappears, press the power button for at least 2 seconds to turn off the power, and then press it again for at least 2 seconds.
- Touch the sensors with your finger. The sensors do not function if you touch them with your finger nail or with gloves on.

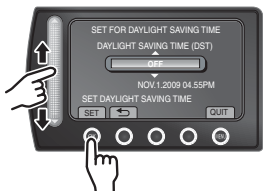
3 Select [CLOCK SETTING]



4 Select the city closest to the area where you use the camcorder

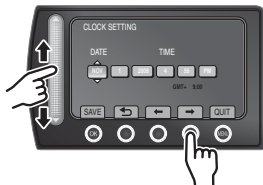


5 Select [ON] if daylight saving time is effective.



6 Set the date and time

Touch sensor: Sets the date and time
→: Moves the cursor to the right
OK: Clock starts

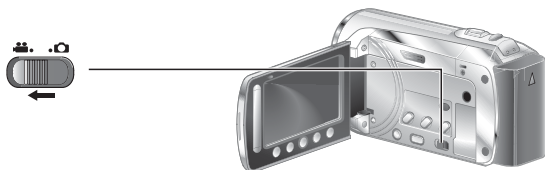


Video recording

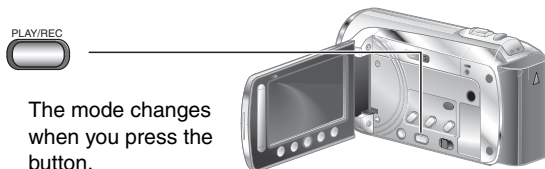
CAUTION

Before recording an important scene, it is recommended to conduct a trial recording.

1 Slide the mode switch to select (video) mode

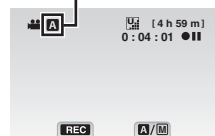


2 Select recording mode

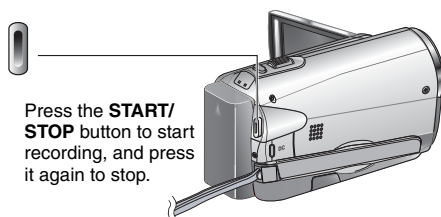


The mode changes when you press the button.

The auto recording indicator appears.

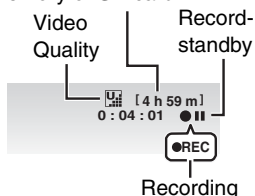


3 Start recording



Press the **START/STOP** button to start recording, and press it again to stop.

Remaining space on built-in memory or SD card

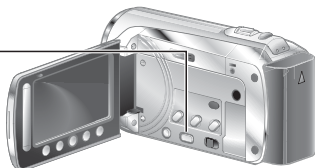


Playing back

1 Select playback mode



The mode changes when you press the button.



2 Select the desired file

Index screen



3 Select ► (Touch OK)

Playback screen



- To perform operations such as forward search or reverse search (➡ pg. 22)
- To view files on TV (➡ pg. 25)

It is recommended to copy your important recorded data to a DVD or other recording media for storage. JVC will not be responsible for any lost data.

CAUTION

Don't forget to make copies after recording!

- To copy files onto DVD discs (➡ pg. 27)
- To dub files using a VCR/DVD recorder (➡ pg. 34)
- To play back a created DVD disc (➡ pg. 28)
- To edit files on your computer (➡ pg. 29)

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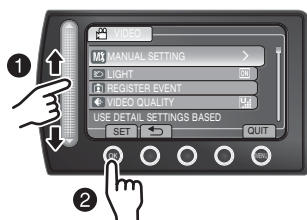
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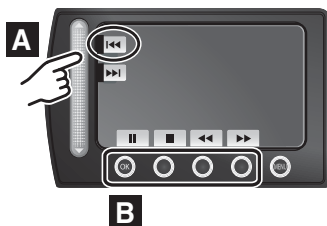
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How to use the Touch Sensor

After the menu is displayed on the LCD monitor:



- 1 Slide your finger up and down on the sensor.
- 2 Select [SET]. (Touch OK.)



- A** To select an on-screen button appearing on the left side, touch the portion of the sensor next to the on-screen button.
- B** To select an on-screen button appearing at the bottom of the screen, touch the buttons underneath them.

Read these INSTRUCTIONS to enjoy your CAMCORDER. For more details on the operations, refer to the GUIDEBOOK in the supplied CD-ROM.



In order to view the GUIDEBOOK, Adobe® Acrobat® Reader™ or Adobe® Reader® must be installed. Adobe® Reader® can be loaded from Adobe's web site:
<http://www.adobe.com/>

NOTE

Select your desired language with a single click.

The model name is indicated on the bottom of your camcorder.

Read This First!

Make a backup of important recorded data

It is recommended to copy your important recorded data to a DVD or other recording media for storage. JVC will not be responsible for any lost data.

Make a trial recording

Before the actual recording of important data, make a trial recording and play back the recorded data to check that the video and sound have been recorded correctly. We recommend you to use the same recording media when performing both the trial recording and the actual recording.

Reset the camcorder if it does not operate correctly

Close the LCD monitor and remove the power supply (battery pack or AC adapter) from the camcorder, then reattach it.

Precautions on handling batteries

- Be sure to use the JVC BN-VF808U/VF815U/VF823U battery packs. This product includes patented and other proprietary technology and is made to be used with the JVC battery and not with other batteries. JVC cannot guarantee safety or performance of this product when it is operated by other batteries.
- If the camcorder is subjected to electrostatic discharge, turn off the power before using it again.

If a malfunction occurs, stop using the camcorder immediately and contact www.jvc.com or by phone at 1-800-252-5722

Recorded data may be erased while the camcorder is being repaired or inspected. Back up all data before requesting repairs or inspections.

Because camcorder may be used for demonstration in a shop, the demonstration mode is set to on by default

To deactivate the demonstration mode, set [DEMO MODE] to [OFF].

When Using an SD Card

- Operations are confirmed on the following SD cards. Class 4 or higher compatible SD or SDHC card Panasonic, TOSHIBA, SanDisk, ATP SD card (256 MB to 2 GB) or SDHC card (4 GB to 32 GB)
- If other media are used, they may fail to record data correctly, or they may lose data that had already been recorded.
- MultiMediaCards are not supported.

GETTING
STARTED

RECORDING/
PLAYBACK

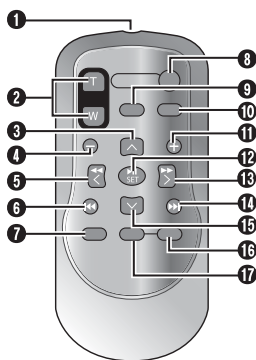
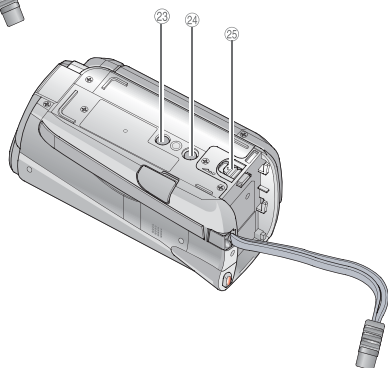
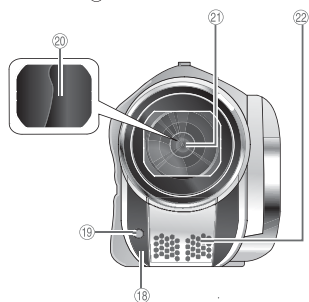
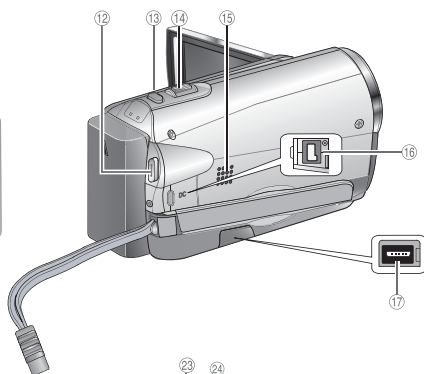
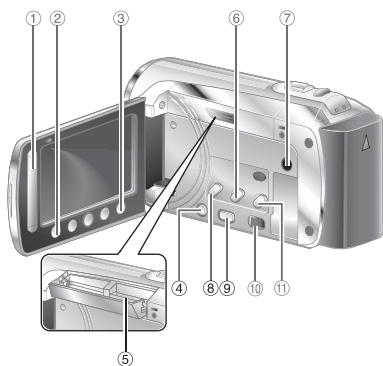
USING WITH
TV

EDITING

COPYING

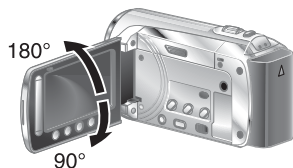
FURTHER
INFORMATION

Index






NOTE

- The LCD monitor can rotate 270°.



- Be careful not to cover 18, 19, 21 and 22 during shooting.

Camcorder

- ① Touch Sensor
- ② **OK** Button
- ③ **MENU** Button
- ④ Power (⏻) Button
- ⑤ SD Card Slot (📄 pg. 18)
- ⑥ **EXPORT** Button
- ⑦ AV Connector
- ⑧ **UPLOAD** Button (📄 pg. 36)
- ⑨ **PLAY/REC** Button (📄 pg. 19, 20, 22, 23)
- ⑩ Mode Switch [, 
- ⑪ **DIRECT DVD** Button (📄 pg. 28)
INFO Button (📄 pg. 21)
- ⑫ **START/STOP** Button (📄 pg. 19)
- ⑬ **SNAPSHOT** Button (📄 pg. 20)
- ⑭ Zoom Lever [W , T] (📄 pg. 21)
Speaker Volume Control
- ⑮ Speaker
- ⑯ DC Connector
- ⑰ USB Connector (📄 pg. 27, 30)
- ⑱ Camera Sensor
- ⑲ LED Light (📄 pg. 21)
- ⑳ Lens Cover
- ㉑ Lens
- ㉒ Stereo Microphone
- ㉓ Stud Hole
- ㉔ Tripod Mounting Socket (📄 pg. 17)
- ㉕ Battery Release Button [BATT.] (📄 pg. 15)

Remote Control

- ❶ Infrared Beam Transmitting Window
- ❷ **ZOOM** (T/W) Buttons (Zoom in/out)
- ❸ Up Button
- ❹ Skip Backward Button
- ❺ Left Button
- ❻ Back Button
- ❼ **PLAYLIST** Button
- ❽ **START/STOP** Button
- ❾ **S. SHOT (SNAPSHOT)** Button
- ❿ **INFO** Button
- ⓫ Skip Forward Button
- ⓬ **PLAY/PAUSE** Button
- ⓭ Right Button
- ⓮ Next Button
- ⓯ Down Button
- ⓰ **INDEX** Button*
- ⓱ **DISP** Button

* Each time you press INDEX, the screen switches as shown below:



mode:

Index Screen ↔ Group Index Screen



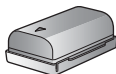
mode:

Index Screen ↔ Date Index Screen

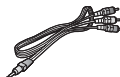
Accessories



AC Adapter
AP-V20U



Battery Pack
BN-VF808U



Audio/Video Cable



Remote Control
RM-V751U



USB Cable



CD-ROM



Core Filter (x2)



Lithium Battery
CR2025
Pre-installed in the remote control unit.

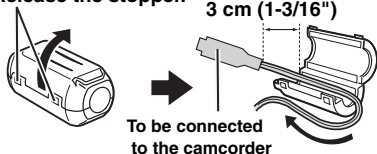
NOTE

Make sure to use the provided cables for connections. Do not use any other cables.

Attaching the Core Filter

The core filter reduces interference caused when connecting to other devices.

Release the stopper.



USB Cable: Wind once
AC Adapter: Wind twice



Preparing the Remote Control

A battery is included inside the remote control at the time of purchase. Remove the insulation sheet before use.

Beam Effective Area



Remote Sensor

Effective distance:
5 m (16 ft)

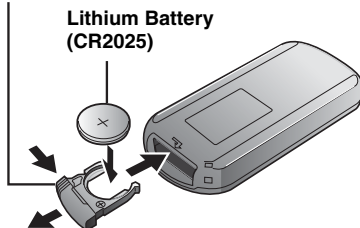
NOTE

The transmitted beam may not be effective or may cause incorrect operation when the remote sensor is directly exposed to sunlight or powerful lighting.

To Reinsert the Battery

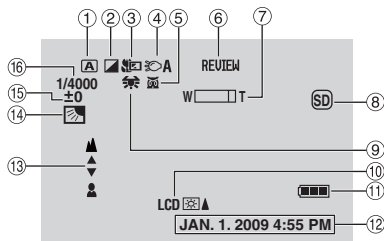
Pull out the battery holder by pressing the lock tab.

Lock Tab



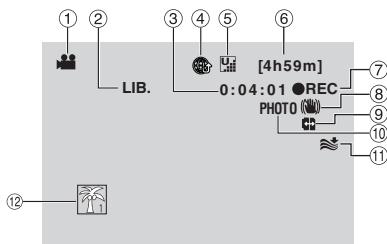
Indications on LCD Monitor

During both Video and Still Image Recording



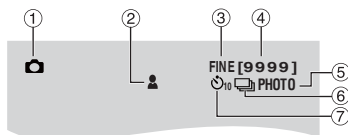
- ① Selected Operation Mode Indicator (pg. 24)
[A] : Auto Mode
[M] : Manual Mode
- ② Effect Mode Indicator
- ③ Tele Macro Mode Indicator
- ④ LED Light Indicator (pg. 21)
- ⑤ Scene Select Mode Indicator
- ⑥ Quick Review Indicator (pg. 19, 20)
- ⑦ Zoom Indicator (pg. 21)
- ⑧ Recording Medium Indicator
[SD] : SD Card
[MB] : Built-in memory
- ⑨ White Balance Indicator
- ⑩ Monitor Backlight Indicator
- ⑪ Battery Indicator
- ⑫ Date/Time (pg. 16)
- ⑬ Manual Focus Adjustment Indicator
- ⑭ Backlight Compensation Indicator (pg. 24)
- ⑮ Brightness Control Indicator
[P] : Photometry Area Control Indicator
- ⑯ Shutter Speed

During Video Recording Only



- ① Mode Indicator
- ② EXPORT Mode Indicator (pg. 35)
- ③ Counter
- ④ Upload Mode Indicator (pg. 36)
- ⑤ Video Quality:
[U] (ULTRA FINE), [F] (FINE), [N] (NORMAL), [E] (ECONOMY)
- ⑥ Remaining Time
- ⑦ ● REC: (Appears during recording.)
● [] : (Appears during record-standby mode.)
- ⑧ Digital Image Stabilizer (DIS) Indicator (Appears when [DIS] is set to [OFF].)
- ⑨ Auto switch record media
- ⑩ Shooting Indicator (pg. 19)
- ⑪ Wind Cut Indicator
- ⑫ Event Indicator

During Still Image Recording Only

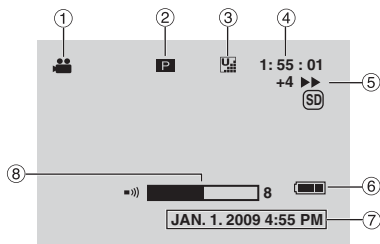


- ① Mode Indicator
- ② Focus Indicator (pg. 20)
- ③ Image Quality: FINE (fine) or STD (standard)
- ④ Remaining Number of Shots
- ⑤ Shooting Indicator (pg. 20)
- ⑥ Shutter Mode Indicator
- ⑦ Self-Timer Indicator

GETTING
STARTED

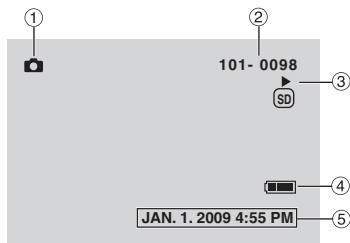
Indications on LCD Monitor (Continued)

During Video Playback



- ① Mode Indicator
- ② Playlist Playback Indicator (Appears when playing back a playlist.)
- ③ Video Quality:
 (ULTRA FINE), (FINE),
 (NORMAL), (ECONOMY)
- ④ Counter
- ⑤ Playback Mode
 - ▶ : Playback
 - ⏸ : Pause
 - ⏭ : Forward Search
 - ⏮ : Reverse Search
 - ⏩ : Forward Slow-Motion
 - ⏪ : Reverse Slow-Motion
(The number on the left shows speed.)
- ⑥ Battery Indicator
- ⑦ Date/Time (⏏ pg. 16)
- ⑧ Volume Level Indicator

During Still Image Playback

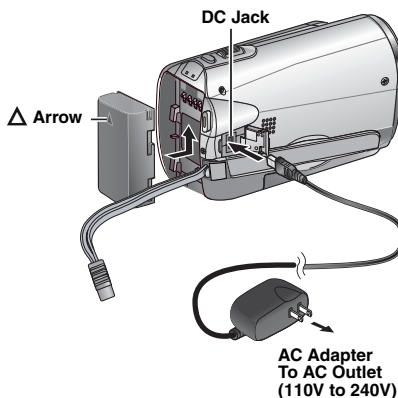


- ① Mode Indicator
- ② older/File Number
- ③ Slide Show Playback Indicator
- ④ Battery Indicator
- ⑤ Date/Time (⏏ pg. 16)

Necessary Settings before Use

Charging the Battery Pack

- 1 Close the LCD monitor to turn off the camcorder.
- 2 Attach the battery pack, then connect the AC adapter.
 - With the "Δ" (arrow) on the battery pack pointing at the correct direction, slide the battery pack until it locks in place.



- The power/charge lamp blinks to indicate charging has started.
- When the lamp goes out, charging is finished.

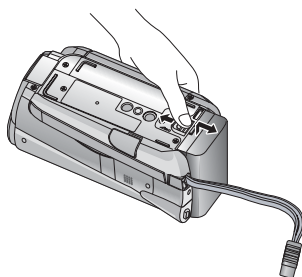
- To check the remaining battery power
See page 21.

- Required charging/recording time (approx.)

*When the LED light is off and the monitor backlight is set to [STANDARD] mode.

Battery pack	Charging time	Recording time
BN-VF808U (Provided)	1 hr. 50 min.	2 hr. 45 min.*
BN-VF815U	2 hr. 40 min.	5 hr. 25 min.*
BN-VF823U	3 hr. 40 min.	8 hr. 10 min.*

- To detach the battery pack



NOTE

- You can also use the camcorder with just the AC adapter.
- The actual recording time may shorten depending on the recording environment, such as when recording scenes with fast moving subject.
- Please do not pull or bend the AC adapter plug and cable. This may damage the AC adapter.

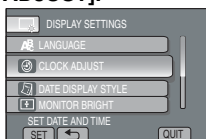
Other Settings

Date/Time Setting

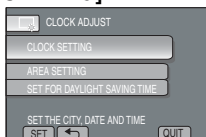
- 1 Open the LCD monitor to turn on the camcorder.
- 2 Touch MENU.
- 3 Select [DISPLAY SETTINGS].



- 4 Select [CLOCK ADJUST].



- 5 Select [CLOCK SETTING].



- 6 Select the city closest to the area where you use the camcorder.

Selected area is highlighted

Principal city of the selected area

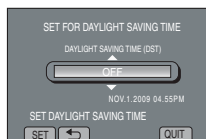
Time difference to GMT



- 7 Select [ON] if daylight saving time is effective.

[ON]: Clock is advanced one hour from the normal time which you set.

[OFF]: Deactivates the function.



- 8 Set the date and time.

Select the item by using the touch sensor and select [→] to set.



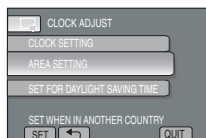
- 9 Select [SAVE].

To reset the setting, select [QUIT]

Setting the clock to local time when traveling

After performing steps 1-4

- 5 Select [AREA SETTING].



- 6 Select the city closest to the area you are traveling.



■ To return to the previous screen
Select [←].

■ To quit the screen
Select [QUIT].

Language Setting

The language on the display can be changed.


- 1 Open the LCD monitor to turn on the camcorder.
- 2 Touch MENU.
- 3 Select [DISPLAY SETTINGS].



- 4 Select [LANGUAGE].



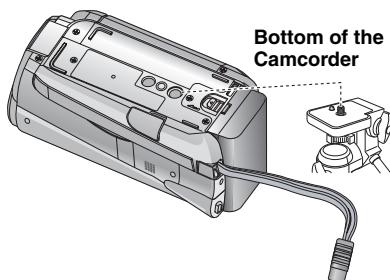
- 5 Select the desired language.

■ To return to the previous screen
Select .

■ To quit the screen
Select [QUIT]

Tripod Mounting

Align the camcorder stud hole with the tripod stud, and the mounting socket with the screw, and then rotate the camcorder clockwise to mount it to the tripod.



NOTE

Do not use a tripod on unsteady or unlevel surfaces. It could tip over, causing serious damage to the camcorder.

Other Settings (Continued)

Using an SD Card

If you want to record to an SD card, the following operations need to be performed.

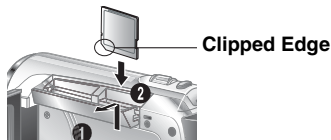
- Operations are confirmed on the following SD cards: Class 4 or higher compatible SD or SDHC card Panasonic, TOSHIBA, SanDisk, ATP SD card (256 MB to 2 GB) or SDHC card (4 GB to 32 GB).
- If other media are used, they may fail to record data correctly, or they may lose data that had already been recorded.
- MultiMediaCards are not supported.
- Cards used to record video on this camcorder cannot be played back on other devices.
- Some card readers (including internal card readers in PCs) may not be able to support SDHC format. If you use an SDHC card for recording and encounter any reading error, the card reader you are using might be a non-SDHC supported device. Please use the camcorder or other SDHC compatible devices to access the card.

1 Insert an SD card

Preparation:

Press Power (⏻) button to turn off the camcorder.

- 1 Open the SD card cover.
- 2 Firmly insert the card with its clipped edge first.



- 3 Close the SD card cover.

■ To remove an SD card

Push the SD card once.

After the card comes out a little, pull it out.

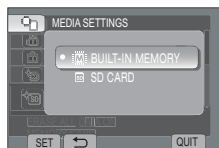
NOTE

- Insert and remove the SD card only while the power is turned off. Otherwise, data on the card may be corrupted.
- Do not touch the terminal on the reverse side of the label.

2 Change the recording medium

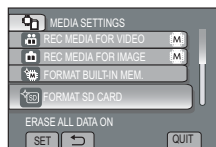
The camcorder is programmed to record on the BUILT-IN MEMORY flash when it is shipped from the factory. You can change the recording medium to SD card.

Set [REC MEDIA FOR VIDEO] to [SD CARD] and [REC MEDIA FOR IMAGE] to [SD].



3 Format an SD card when using it for the first time


Select [FORMAT SD CARD] to format the card.



It is recommended to copy your important recorded data to a DVD or other recording media for storage. JVC will not be responsible for any lost data.

Recording Files

Video Recording

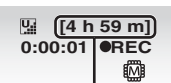
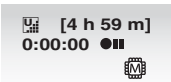

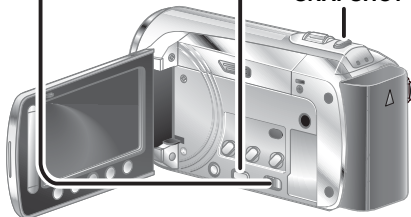
1 Slide the mode switch to select  (video) mode.

2 Press the **PLAY/REC** button to select recording mode.

3 Press the **START/STOP** button to start recording.

Approximate remaining time for recording appears.


You can also start/stop recording by selecting [REC] on the LCD monitor. (On-screen recording control).




■ To stop recording

Press the **START/STOP** again.

■ To view the last recorded scene

Select  while recording is paused.

Selecting  during playback deletes that scene.

■ To record a still image during video recording

Press **SNAPSHOT**.

■ To change the picture quality

Change the settings in [VIDEO QUALITY].

■ To change the aspect ratio of the image (16:9/4:3)












Change the settings in [SELECT ASPECT RATIO].

NOTE

- The video recording mode is automatically selected when you turn off the camcorder and then on again.
- If the camcorder is not operated for 5 minutes while the power is on, it turns itself off automatically to conserve power.
- After recording video for 12 consecutive hours, recording stops automatically.
- A new file will be created for every 4 GB of continuous shooting.
- This camcorder records video in MPEG2 format compliant with SD-VIDEO format. This camcorder is not compatible with other digital video formats.

Recording Files (Continued)

Still Image Recording

- 1** Slide the mode switch to select  (still image) mode.

 - 2** Press the PLAY/REC button to select recording mode.


 - 3** Press and hold the SNAPSHOT button halfway.


The  indicator becomes green when the captured image is focused.
 - 4** Press the SNAPSHOT button fully to take the photo/picture.


- **To view the last recorded image**
Select  after shooting.
Selecting  during playback deletes that image.
- **To change the picture quality**
Change the settings in [IMAGE QUALITY].
- **To record still images continuously**
Set to [CONTINUOUS SHOOTING] in [SHUTTER MODE].

NOTE

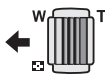
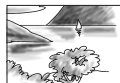
- DIS (Digital Image Stabilizer) does not function during still image recording.
- If the camcorder is not operated for 5 minutes while the power is on, it turns itself off automatically to conserve power.

Zooming

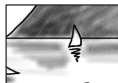
Preparation:

- Slide the mode switch to select or mode.
- Press the **PLAY/REC** button to select recording mode.

Zoom out



Zoom in



W: Wide angle

T: Telephoto

You can also zoom out/zoom in by selecting [W] or [T] on the LCD monitor. (On-screen zoom control).

Zoom Ratio (Factory-preset)

mode	mode
[80X/DIGITAL]	[35X/OPTICAL]

■ To change the maximum zoom ratio (for mode only)

Change the settings in [ZOOM].

NOTE

Macro shooting is possible as close as approx. 5 cm (2") to the subject when the zoom lever is set all the way to **W**.

LED Light

Preparation:

- Slide the mode switch to select or mode.
- Press the **PLAY/REC** button to select recording mode.

1 Touch MENU.

2 Select [LIGHT].

3 Select the desired setting.

ON	The LED light remains on regardless of the surrounding conditions.
AUTO	The LED light turns on automatically when shooting in insufficient light conditions.
OFF	Deactivates this function

Checking the Remaining Battery Power

Preparation:

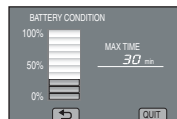
- Attach the battery pack.
- Press the **PLAY/REC** button to select recording mode.

For mode:

Press the **INFO** button three times or **INFO** and then select .

For mode:

Press **INFO**.



■ To return to the normal screen

Select [QUIT] or press **INFO**.

NOTE

The recordable time display should only be used as a guide. It is displayed in 10 minute units.

Checking the Remaining Space on the recording medium

Preparation:

- Slide the mode switch to select mode.
- Press the **PLAY/REC** button to select recording mode.

Press the **INFO** button once (**BUILT-IN MEMORY**) or twice (**SD CARD**).



The maximum recording time is displayed for each video quality mode.

■ To change the picture quality

- Select the video quality.
- Select [SET].

■ To Change the Recording Media

- Press **INFO** to select Built-in Memory or SD.
- SELECT [SET].

■ To quit the screen

Select [QUIT].

Playing Back Files

Video Playback

- 1** Slide the mode switch to select **⏮ (video) mode**.



- 2** Press **PLAY/REC** to select the playback mode.



- The index screen appears.
Select the desired file.



- **To move to the previous or next page**
Touch **[▲]** or **[▼]** for over a second.
- **To play back a few seconds from each select scene of the recorded videos**
Touch **[DIGEST]**.

- **To delete a video**
Select **[]** when playback is stopped.
- **To change the number of thumbnails (6 thumbnails / 20 thumbnails)**
Move the zoom lever to **[T]** or **[W]**.

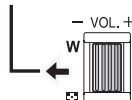
■ Operations during Video Playback On-screen buttons

- ⏮: Return to the first scene of the file
- ⏪: Go to the first scene of the next file
- ⏩: Return to the index screen
- ⏮: Reverse search (during playback)
- ⏮: Frame-by-frame playback in reverse direction (during pause)*
- ▶: Playback
- ⏸: Pause
- ⏭: Forward search (during playback)
- ⏭: Frame-by-frame playback in forward direction (during pause)*

* Slow playback starts when you keep touching the sensor button under **⏮ / ⏭** for a while.

■ Speaker volume

—: Turn down the volume



+ : Turn up the volume

Still Image Playback

- 1** Slide the mode switch to select (still image) mode.



- 2** Press **PLAY/REC** to select the playback mode.



The index screen appears.

Select the desired file.



- **To move to the previous or next page**
Touch or for over a second.

- **To delete a still image**

Select .

- **To change the number of thumbnails (6 thumbnails/20 thumbnails)**

Move the zoom lever to or .

■ Operations during Still Image Playback On-screen buttons



- ◀ : Change playback order of slide show in reverse direction
- ▶ : Change playback order of slide show in forward direction
- : Return to the index screen
- ◀◀ : Display the previous file
- ▶▶ : Start the slide show
- || : End the slide show
- ▶▶ : Display the next file

Manual Recording

Manual recording mode enables you to set the focus and screen brightness etc. manually.

Change to Manual Recording Mode

Preparation:

- Slide the mode switch to select  or  mode.
- Press the **PLAY/REC** button to select recording mode.

Select **[A/M]** twice.



■ To return to the auto recording mode

Select **[A/M]** so that the **[A]** indicator appears.

Backlight Compensation

Backlight compensation brightens the subject by increasing the exposure.

In the manual recording mode;


Select .



■ To cancel backlight compensation

Select  again.

NOTE

If the LCD monitor is turned upside down,  is not displayed. Change the setting when the LCD monitor is in the normal position.

Manual Setting Menu

In the manual recording mode:

- 1 Touch **MENU**.
- 2 Select **[MANUAL SETTING]**.



- 3 Select the desired menu.



- 4 Select the desired setting.



Depending on the kind of settings you select, you can set the value by using the touch sensor.

■ To return to the previous screen

Select .

■ To quit the screen

Select **[QUIT]**.

Viewing Files on TV

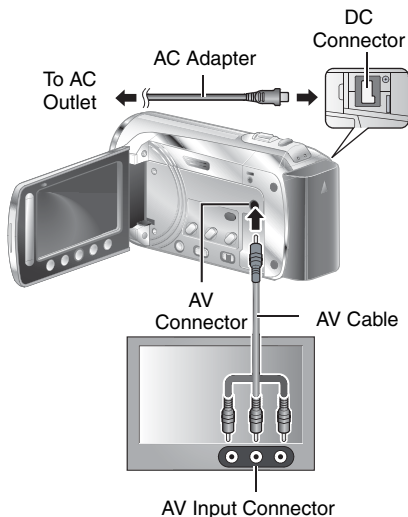
This camcorder is designed to be used with NTSC-type color television signals. It cannot be used with a television of a different standard.

Connection with TV

■ To connect using the AV connector.

Preparation:

Turn off all units.



Playback Operation

After the connection with TV is completed

- 1 Turn on the camcorder and the TV.
- 2 Set the TV to its VIDEO mode.
- 3 (Only when connecting the camcorder to the VCR/DVD recorder)
Turn on the VCR/DVD recorder, and set the VCR/DVD recorder to its AUX input mode.
- 4 Start playback on the camcorder.
(p. 22, 23)

Managing Files


CAUTION

Do not remove the recording medium or perform any other operation (such as turning off the power) while accessing files. Also, be sure to use the provided AC adapter, as the data on the recording medium may be corrupted if the battery becomes exhausted during operation. If the data on the recording medium becomes corrupted, format the recording medium to use the medium again.

Capture a Still Image from a Video

You can capture the desired scene from a recorded video, and store it as a still image.

Preparation:

- Slide the mode switch to select  mode.
- Press the **PLAY/REC** button to select playback mode.

Press **SNAPSHOT** when playback is paused.





NOTE

- Captured still images are stored at a resolution of 640 x 360 (if the video was recorded in 16:9) or 640 x 480 (if the video was recorded in 4:3). The image can be elongated in the horizontal or vertical directions depending on the quality of the source video file.
- The continuous shooting function cannot be used to capture images.
- You cannot capture video during playback.

Deleting Files

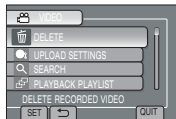
- Protected files cannot be deleted. To delete them, release the protection first.
- Once files are deleted, they cannot be restored. Check files before deleting.

Preparation:

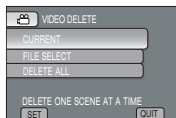
- Slide the mode switch to select  or  mode.
- Press the **PLAY/REC** button to select playback mode.

1 Touch MENU.

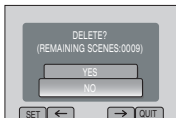
2 Select [DELETE]





3 Select [CURRENT].



4 Select [YES].



You can select the previous or next file by selecting  or .

■ To quit the screen

Select [QUIT].

Copying Files

It is recommended to copy your important recorded data to a DVD or other recording media for storage. JVC will not be responsible for any lost data.

Types of Copying and Connectable Device



DVD Burner (CU-VD3/CU-VD50)

You can copy video files recorded on this camcorder onto DVD discs.



PC

You can copy video/still image files on this camcorder onto your PC.



VCR/DVD Recorder

You can dub video files recorded on this camcorder onto DVD discs.

NOTE

It is recommended to use the JVC DVD burner (CU-VD50/CU-VD3). When using CU-VD20 or CU-VD40, the recording time may take approx. 2 times longer than the time that is described in the instruction manual of DVD burner.

Using a DVD Burner

Supported discs: 12cm DVD-R, DVD-RW

- Regarding DVD-R discs, only unused DVD-R discs can be used. Regarding DVD-RW discs, used DVD-RW discs can also be used, but they need to be formatted before recording. Formatting a disc deletes all content recorded on the disc up until that time.
- Dual-layer discs cannot be used.

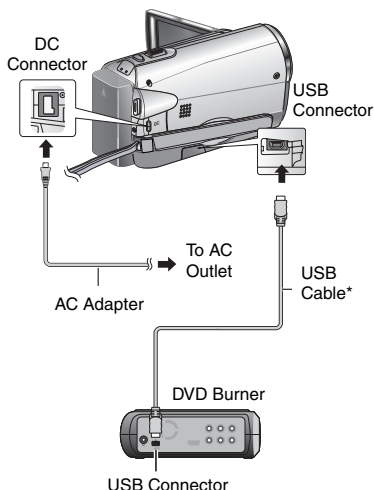
Regarding finalization after copying

The disc is automatically finalized so that it can be played on other devices. After finalizing, the disc is a play-only disc, so no more files can be added.

Connection with a DVD Burner

Preparation:

Turn on the camcorder first, then turn on the DVD burner.



NOTE

- Refer also to the optional DVD burner's instruction manual.
- * Use the USB cable that came with the DVD burner.

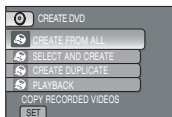
Copying Files (Continued)

Backup All Files

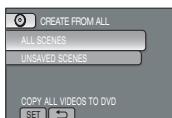
Preparation:

- Connect the camcorder to the DVD burner.
- Slide the mode switch to select **■** mode.

1 Select [CREATE FROM ALL].



2 Select the desired menu.



- **[ALL SCENES]:**
All files in the recording medium are copied.
- **[UNSAVED SCENES]:**
Files that have never been copied to a DVD disc are automatically selected and copied.

3 Select the desired disc number.



- If you select [ALL], all discs in the list are created.
- To preview scenes, select [CHECK].
- **●** mark shows that the disc is created already.

4 Select [YES] or [NO].

- **[YES]:** Displays the thumbnails by group.
- **[NO]:** Displays the thumbnails by date.

5 Select [EXECUTE].

- The files are copied on the disc. When [COMPLETED] appears, touch **OK**.
- When [INSERT NEXT DISC PRESS [STOP] TO EXIT CREATE] appears, change the disc. Remaining files are copied on the second disc.
- To cancel copying, select [STOP].

Copying Video Files that Have Never Been Copied

Files that have never been copied to the DVD discs are automatically selected and copied.

1 Open the LCD monitor to turn on the camcorder.

2 Press the DIRECT DVD.



3 Select [EXECUTE].



- The DVD disc begins to be created. When [COMPLETED] appears, touch **OK**.
- When [INSERT NEXT DISC PRESS [STOP] TO EXIT CREATE] appears, change the disc. Remaining files are copied on the second disc.
- To cancel the DVD creation, select [STOP].

■ To quit the screen

- 1) Select [QUIT].
- 2) When [QUIT?] appears, select [YES].

■ To play back the created disc using the camcorder

- 1) Connect the camcorder to the DVD burner.
- 2) Turn on the camcorder first, then turn on the DVD burner.
- 3) Select [PLAYBACK].
- 4) Select the desired folder.
- 5) Select the creation date of the disc.
- 6) Select the desired file. To return to the previous screen, select **⏮**.

Creating a DVD using a PC

Please read the “JVC SOFTWARE LICENCE AGREEMENT” in the CD-ROM instruction before you install software.

You can copy the data from the camcorder and create a DVD using a PC.

1 Installing the software to the PC

System Requirements

Windows Vista

OS: Windows Vista®
Home Basic (SP1)
Home Premium (SP1)
(32-bit, pre-installed)

CPU: Either one of the following:
• Intel® Pentium® 4, 1.6 GHz or higher
• Intel® Pentium® M, 1.4 GHz or higher
• Intel® Core™ Duo, 1.5 GHz or higher

RAM: At least 1 GB

Windows XP

OS: Windows® XP
Home Edition (SP2/SP3)
Professional (SP2/SP3)
(pre-installed)

CPU: Either one of the following:
• Intel® Pentium® 4, 1.6 GHz or higher
• Intel® Pentium® M, 1.4 GHz or higher
• Intel® Core™ Duo, 1.5 GHz or higher

RAM: At least 512 MB

■ To check the PC specification

Right-click on [Computer] (or [My Computer]) in the [Start] menu and select [Properties].

NOTE

- Make sure your PC has a recordable DVD drive.
- If your system does not meet the requirements, it is recommended to copy files using the DVD burner. (p. 27)
- Macintosh users may use the software included with their Macintosh (iMovie '08, iPhoto) to copy files to their computer.

Preparation:

Load the provided CD-ROM into the PC. In Windows Vista, the auto play dialog box appears.

1 Click [Easy Installation].

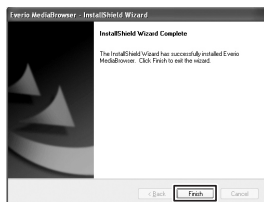


Follow the on-screen instructions.

2 Click [Next].



3 Click [Finish].

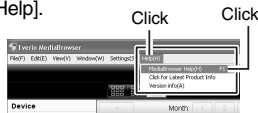


Everio MediaBrowser icon is created on the desktop.



■ To see the Instruction Guide for Everio MediaBrowser

- 1) Double-click the icon of Everio MediaBrowser.
- 2) Click [Help], and click [MediaBrowser Help].

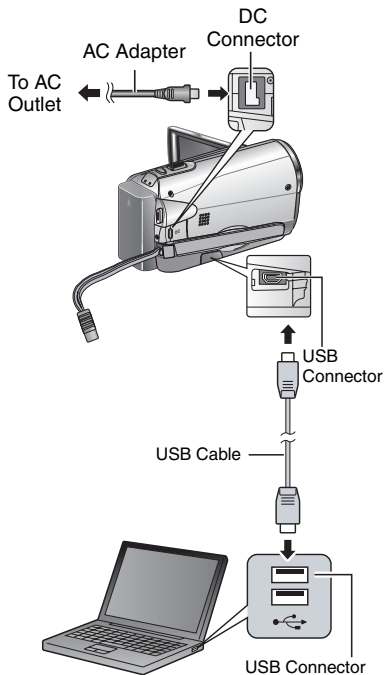


Copying Files (Continued)

② Making Backup on the PC

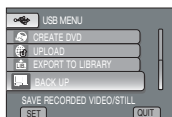
Preparation:

- Install the software to the PC.
- Make sure that enough free space is left in the PC's HDD.
- Close the LCD monitor to turn off the camcorder.



1 Open the LCD monitor to turn on the camcorder.

2 Select [BACK UP].



Everio MediaBrowser starts on the PC.



3 Click [All volume in camcorder] and click [Next].



4 Click [Start].



Backup starts.

■ To disconnect the camcorder from the PC

- 1) Right-click the icon (Safely Remove Hardware) on the task bar and select [Safely remove USB Mass Storage Device].
- 2) Follow the on-screen instructions and make sure that the device can be safely removed.
- 3) Disconnect the USB cable and close the LCD monitor.

NOTE

It takes time to backup many videos.

3 Making User Lists to Arrange the Files

You can make a user list of a certain subject (such as Travel, Athletic meet) and put the files related to the subject into the user list.

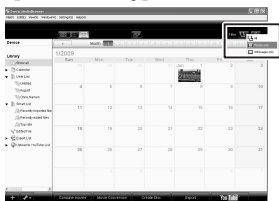
Preparation:

Make backup on the PC.

1 Double-click icon and open the calendar.



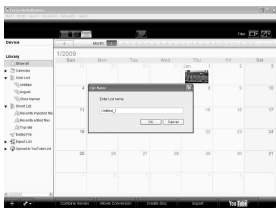
2 Select [Movies only].



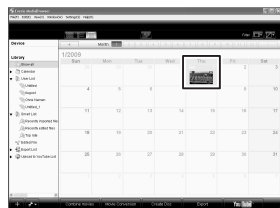
3 Click [+].



4 Input the name of the new user list and click [OK].



5 Double-click the recording date.



The files recorded on the day are displayed.

6 Drag the file and drop into the user list.



To add other files into the user list, repeat steps 5 and 6

Copying Files (Continued)

❶ Copying Files to a DVD

Preparation:

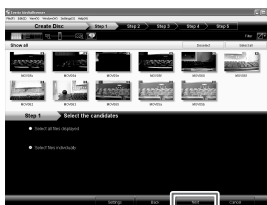
Use a recordable DVD disc (It is recommended to use a DVD-R disc.)

1 Select the user list and click [Create Disc].



2 Click [Select files individually] and click [Next].

To add all the files onto DVD discs, click [Select all files displayed], then go to step 4.



3 Drag the file, and drop into the part at the bottom and click [Next].



4 Input the disc name, select the top menu style and click [Next].



5 Click [Start].



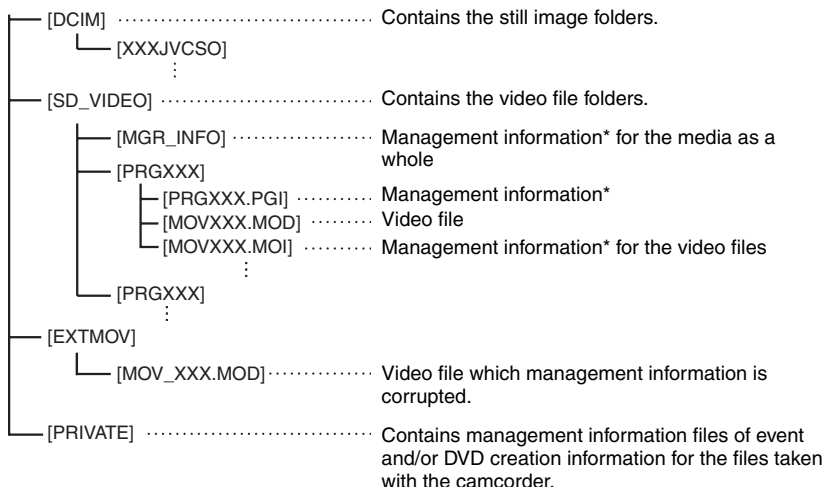
NOTE

- For detail on operating Everio MediaBrowser, click [Help] and refer to [MediaBrowser Help].
- Adobe® Reader® must be installed to read [MediaBrowser Help]. Adobe® Reader® can be loaded from Adobe's web site: <http://www.adobe.com>
- For assistance in operating the provided software, refer to the support information. (p. 33)

Folder Structure and Extensions

Recording medium

X = number



* Information such as the date and time of recording, recorded with the video file.

Customer Support Information

Use of this software is authorized according to the terms of the software licence.

JVC

When contacting the nearest JVC office or agency in your country (refer to the JVC Worldwide Service Network at <http://www.jvc-victor.co.jp/english/worldmap/index-e.html>) about this software, please have the following information ready.

- Product Name, Model, Problem, Error Message.
- PC, (Manufacturer, Model (Desktop/Laptop), CPU, OS, Memory (MB), Available Hard Disk Space (GB)).

Please note that it may take some time to respond to your questions, depending on their subject matter. JVC cannot answer questions regarding basic operation of your PC, or questions regarding specifications or performance of the OS, other applications or drivers.

Pixela

Region	Language	Phone #
USA and Canada	English	+1-800-458-4029 (toll-free)
Europe (UK, Germany, France and Spain)	English/Germany/France/Spanish	+1-800-1532-4865 (toll-free)
Other Countries in Europe	English/Germany/France/Spanish/ Italian/Dutch	+44-1489-564-764
Asia (Philippines)	English	+63-2-438-0090
China	Chinese	+86-21-5385-3786

Homepage: <http://www.pixela.co.jp/oem/jvc/mediabrowser/e/>
Please check our website for latest information and downloading.

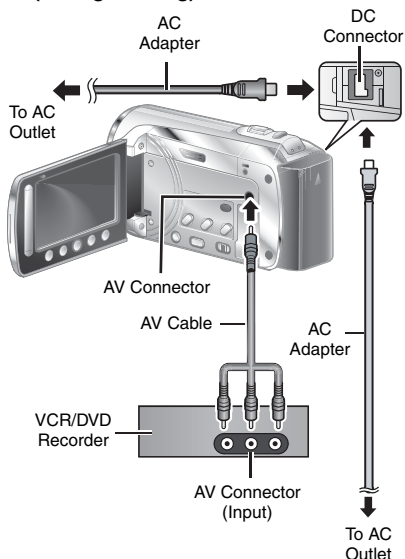
Copying Files (Continued)

Dubbing Files to a VCR/DVD Recorder

Preparation:

- Create a playlist.
- Turn off all units.

■ To connect using the AV connectors (analog dubbing)



1 Open the LCD monitor to turn on the camcorder.

2 Set the VCR/DVD recorder to its AUX input mode.

Check that the images from the camcorder are input correctly to the VCR/DVD recorder.

3 Play back playlists on the camcorder.

- 1) Touch MENU.
- 2) Select [DUBBING PLAYBACK].
- 3) Select the desired playlist.
- 4) Select [YES]. (A black screen is displayed for 5 seconds at the first and the last scene.)

4 At the point you want to start dubbing, start recording on the VCR/DVD recorder.

Refer to the VCR/DVD recorder's instruction manual.

■ To stop dubbing

Stop recording on the VCR/DVD recorder.


- ### ■ To hide the date or icons on the screen
- Change the settings in [DISPLAY ON TV].

Using with a Portable Media Player

Turning on the Export Mode

You can easily transfer videos recorded in export mode to iTunes®. All the files with the export setting turned on are transferred to PC. For details on transferring, refer to the operation guide of MediaBrowser in the CD-ROM.

Preparation:

- Slide the mode switch to select  mode.
- Press the **PLAY/REC** button to select recording mode.

Press **EXPORT** twice.

EXPORT




- **To turn off the export mode**
Press **EXPORT** twice.

Changing the Export Setting

You can set the recorded videos to the export setting.

Preparation:

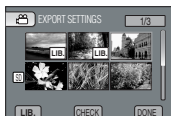
- Slide the mode switch to select  mode.
- Press the **PLAY/REC** button to select playback mode.

1 Press EXPORT.

EXPORT



2 Select the file and select [LIB.].



- To check the content of the file, select [CHECK].

3 Select [DONE].

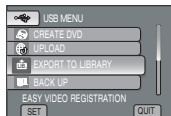
- **To cancel the export setting**
Select the file and press [LIB.] again.
- **To quit the screen**
 - 1) Select [DONE].
 - 2) Select [YES].

Transferring the Files to PC

Preparation:

Install iTunes® on a PC.
<http://www.apple.com/itunes/>

- 1 **Connect the camcorder to the PC with the USB cable.**
- 2 **Select [EXPORT TO LIBRARY].**




All the files with the export setting turned on are transferred to PC.

- **Cannot export the file to iTunes®**
 - Refer to "Q&A", "Latest Information", "Download Information", etc. in [Click for Latest Product Info] in the help of the provided Everio MediaBrowser software.

Turning on the Upload Mode

You can upload the file to video sharing websites (YouTube™) quickly after recording. For more information on YouTube™, visit YouTube™ website: <http://www.youtube.com/>

Preparation:

- Slide the mode switch to select  mode.
- Press the **PLAY/REC** button to select recording mode

Press UPLOAD twice.



If you record a file with the upload mode set on, the recording stops automatically 10 minutes after the recording is started. The remaining time is displayed on the LCD monitor.

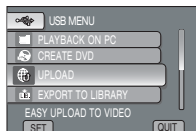
NOTE

The upload mode turns off each time recording is finished.

Uploading Files

For details on uploading files, refer to the operation guide of MediaBrowser in the CD-ROM.

- 1 Connect the camcorder to the PC with the USB cable.**
- 2 Select [UPLOAD].**



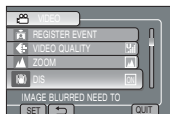
■ Cannot upload the file to YouTube™

- You need your YouTube™ account to upload files to YouTube™. Create your account.
- Refer to “Q&A”, “Latest Information”, “Download Information”, etc. in [Click for Latest Product Info] in the help of the provided Everio MediaBrowser software.

Changing the Menu Settings

1 Touch MENU.

2 Select the desired menu.



3 Select the desired setting.



- To return to the previous screen
Select [←].
- To quit the screen
Select [QUIT].

Troubleshooting

Before requesting service, consult the following chart. If the solutions indicated in the chart do not solve the problem, consult your nearest JVC dealer or JVC service center for instructions.

Refer also to the FAQ of new products on JVC's website.

The following phenomena are not malfunctions.

- The camcorder heats up when it is used for a long time.
- The battery heats up during charging.
- When playing back a video file, the image stops momentarily or the sound is interrupted at junctions between scenes.
- LCD monitor momentarily become red or black when sunlight is recorded.
- Black spots, or red, green, or blue spots appear on the LCD monitor. (The LCD monitor contains 99.99% effective pixels, but 0.01% of fewer pixels may be ineffective.)

Trouble		Action
Power	No power is supplied.	<ul style="list-style-type: none">● Connect the AC adapter securely.● Recharge the battery pack.
Display	The remaining battery display is not correct.	<ul style="list-style-type: none">● Fully charge the battery pack, run it down, and then recharge it again.● If the camcorder is used for long periods of time in high or low temperatures, or if the battery pack is repeatedly charged, the amount of remaining battery may not be displayed correctly.
	The LCD monitor is difficult to see.	<ul style="list-style-type: none">● The LCD monitor may be difficult to see if used in bright areas such as under direct sunlight.

Troubleshooting (Continued)

Trouble		Action
Recording	Recording cannot be performed.	<ul style="list-style-type: none"> SD Card or Built-In Memory is full. Delete unnecessary files or replace the SD Card.
	Recording stops by itself.	<ul style="list-style-type: none"> Insert a commercially available SD card, and set each of the [REC MEDIA FOR VIDEO] to [SD Card] and [REC MEDIA FOR IMAGE] to [SD]. Recording stops automatically after 12 hours of continuous recording.
Playback	Sound or video are interrupted.	<ul style="list-style-type: none"> Sometimes playback is interrupted at the connecting section between two scenes. This is not a malfunction.
	Cannot find a recorded video/image.	<ul style="list-style-type: none"> Select [PLAYBACK MPG FILE] then search the video on the index screen. (Video files that have damaged management information can be played back.) Cancel group display and date search functions. Change the setting in [REC MEDIA FOR VIDEO] or [REC MEDIA FOR IMAGE]. (Files on other media are not displayed.) Slide the mode switch to select the desired mode (👤 or 📷).
Other Problems	The lamp does not flash during battery pack charging.	<ul style="list-style-type: none"> Check the remaining battery pack charge. (When the battery pack is fully charged, the lamp does not flash.) When recharging in either a hot or cold environment, ensure that battery is being charged within the permitted temperature range. (If the battery pack is being recharged outside the permitted temperature range, recharging may stop to protect the battery pack.)
	Cannot upload the file to YouTube™	<ul style="list-style-type: none"> You need your YouTube™ account to upload files to YouTube™. Create your account. Refer to "Q&A", "Latest Information", "Download Information", etc. in [Click for Latest Product Info] in the help of the provided Everio MediaBrowser software.
	Cannot export the file to iTunes®	<ul style="list-style-type: none"> Refer to "Q&A", "Latest Information", "Download Information", etc. in [Click for Latest Product Info] in the help of the provided Everio MediaBrowser software.

■ To reset the camcorder when it does not operate normally

- Close the LCD monitor and remove the power supply (battery pack or AC adapter) from the camcorder, then reattach it.
- Execute [FACTORY PRESET].

Warning Indications

Indication	Action
SET DATE/TIME!	<ul style="list-style-type: none"> ● Set the clock. If the message still appears after setting the clock, the battery for the clock has been depleted. Consult your nearest JVC dealer.
COMMUNICATING ERROR	<ul style="list-style-type: none"> ● Be sure to use JVC battery packs.
NOT FORMATTED	<ul style="list-style-type: none"> ● Select [OK] and select [YES] to perform formatting.
FORMAT ERROR!	<ul style="list-style-type: none"> ● Check the operating procedure, and perform once again. ● Turn off the camcorder, and turn it on again.
DATA DELETION ERROR	
BUILT-IN MEMORY ERROR!	<ul style="list-style-type: none"> ● Turn off the camcorder, and turn it on again. ● If the problem persists, backup all data, and then perform formatting (All data is deleted).
MEMORY CARD ERROR!	<ul style="list-style-type: none"> ● Turn off the camcorder, and turn it on again. ● Remove and re-insert the SD card (MultiMediaCard cannot be used). ● Remove any dirt from the SD card terminals. ● Insert the SD card before switching the power on. ● If the problem persists, backup all data, and then perform formatting (All data is deleted).
CANNOT TAKE MORE STILL IMAGES AT THE MOMENT	<ul style="list-style-type: none"> ● Stop video recording, and then record a still image. (If an SD card is removed or inserted during video recording, a still image cannot be recorded.)
RECORDING FAILURE	<ul style="list-style-type: none"> ● Turn off the camcorder, and turn it on again.
USE AC ADAPTER	<ul style="list-style-type: none"> ● Use the AC Adapter as power supply.

Specifications

Camcorder

■ For general

Power supply

DC 11 V (Using AC adapter)

DC 7.2 V (Using battery pack)

Power consumption

Approx. 1.8 W*

* When the LED light is off and the monitor backlight is set to [STANDARD] mode.

Dimensions (W x H x D)

54.5 mm x 65 mm x 112.5 mm

(2-1/8"x2-9/16"x4-7/16")

Weight

Approx. 245 g (0.54 lbs)

(incl. grip belt)

Approx. 290 g (0.64 lbs)

(incl. battery and grip belt)

Operating temperature

0°C to 40°C (32°F to 104°F)

Operating humidity

35% to 80%

Storage temperature

-20°C to 50°C (-4°F to 122°F)

Pickup

1/6" (800,000 pixels) CCD

Lens

F 1.8 to 4.0, f = 2.2 mm to 77.0 mm,

35:1 power zoom lens

Filter diameter

ø30.5 mm

LCD monitor

2.7" diagonally measured, LCD panel/TFT

active matrix system

LED Light

Within 1.5 m (4.9 ft)

(recommended shooting distance)

■ For video/Audio

Format

SD-VIDEO

Recording/Playback format

Video: MPEG-2

Audio: Dolby Digital (2 ch)

Signal format

NTSC standard

Recording mode (video)

ULTRA FINE: 720 x 480 pixels, 8.5 Mbps (VBR)

FINE: 720 x 480 pixels, 5.5 Mbps (VBR)

NORMAL: 720 x 480 pixels, 4.2 Mbps (VBR)

ECONOMY: 352 x 240 pixels, 1.5 Mbps (VBR)

Recording mode (audio)

ULTRA FINE: 48 kHz, 384 kbps

FINE: 48 kHz, 384 kbps

NORMAL: 48 kHz, 256 kbps

ECONOMY: 48 kHz, 128 kbps

■ For still image

Format

JPEG

Image size

832 x 624

Picture quality

FINE/STANDARD

■ For connectors

AV output

Video output: 1.0 V (p-p), 75 Ω

Audio output: 300 mV (rms), 1 kΩ

USB

Mini USB type A and B, USB 2.0 compliant

AC Adapter

Power requirement

AC 110 V to 240 V~, 50 Hz/60 Hz

Output

DC 11 V —, 1 A

Remote Control

Power supply

DC 3 V

Battery life

Approx. 1 year
(depending on the frequency of use)

Operating distance

Within 5 m (16.4 ft)

Operating temperature

0°C to 40°C (32°F to 104°F)

Dimensions (W x H x D)

42 mm x 14.5 mm x 91 mm
(1-11/16" x 5/8" x 3-5/8")

Weight

Approx. 30 g (0.07 lbs)
(incl. battery)

Design and specifications subject to change without notice.

Approximate recording time (for video)




h: hour/m: minute

Recording medium Quality	SD or SDHC Card							
	256 MB	512 MB	1 GB	2 GB	4 GB	8 GB	16 GB	32 GB
ULTRA FINE	3 min.	6 min.	14 min.	29 min.	1 hr.	1 hr. 50 min.	3 hr. 45 min.	7 hr. 30 min.
FINE	5 min.	10 min.	21 min.	43 min.	1 hr. 20 min.	2 hr. 50 min.	5 hr. 40 min.	11 hr. 20 min.
NORMAL	6 min.	13 min.	29 min.	1 hr.	1 hr. 50 min.	3 hr. 45 min.	7 hr. 30 min.	15 hr. 00 min.
ECONOMY	18 min.	36 min.	1 hr. 20 min.	2 hr. 30 min.	5 hr.	9 hr. 55 min.	20 hr. 00 min.	40 hr. 00 min.

Recording medium Quality	Built-In Memory
	16 GB
ULTRA FINE	3 hr. 45 min.
FINE	5 hr. 40 min.
NORMAL	7 hr. 30 min.
ECONOMY	20 hr. 00 min.

Approximate number of storable images (for still image)

The Built-In Memory can record up to 9999 still images in either mode.

Mode	Recording medium		SD or SDHC Card							
	Image size/Quality		256 MB	512 MB	1 GB	2 GB	4 GB	8 GB	16 GB	32 GB
	4:3	640 x 480 / FINE	1450	2920	5930	9999	9999	9999	9999	9999
		640 x 480 / STANDARD	2080	4180	8480	9999	9999	9999	9999	9999
	4:3	832 x 624 / FINE	970	1950	3950	7590	9999	9999	9999	9999
		832 x 624 / STANDARD	1450	2920	5930	9999	9999	9999	9999	9999
	16:9	640 x 360 / FINE	1820	3660	7420	9999	9999	9999	9999	9999
		640 x 360 / STANDARD	2420	4880	9890	9999	9999	9999	9999	9999

The recordable time and the number of still images are approximate and may differ depending on the recording environment, the condition of the SD card, or the remaining battery power.

Cautions

AC Adapter

When using the AC adapter in areas other than the USA

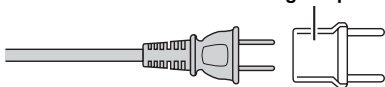
The provided AC adapter features automatic voltage selection in the AC range from 110 V to 240 V.

USING HOUSEHOLD AC PLUG ADAPTER

In case of connecting the unit's power cord to an AC wall outlet other than American National Standard C73 series type use an AC plug adapter, called a "Siemens Plug", as shown.

For this AC plug adapter, consult your nearest JVC dealer.

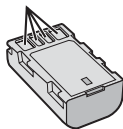
Plug Adapter



Battery Packs

The supplied battery pack is a lithium-ion battery. Before using the supplied battery pack or an optional battery pack, be sure to read the following cautions:

Terminals



- **To avoid hazards**
 - ... do not burn.
 - ... do not short-circuit the terminals. Keep it away from metallic objects when not in use. When transporting, make sure the provided battery cap is attached to the battery. If the battery cap is misplaced, carry the battery in a plastic bag.
 - ... do not modify or disassemble.
 - ... do not expose the battery to temperatures exceeding 60°C, as this may cause the battery to overheat, explode or catch fire.
 - ... use only specified chargers.
- **To prevent damage and prolong service life**
 - ... do not subject to unnecessary shock.
 - ... charge within the temperature range of 10°C to 35°C (50°F to 95°F). This is a chemical reaction type battery — cooler temperatures impede chemical reaction, while warmer temperatures can prevent complete charging.
 - ... store in a cool, dry place. Extended exposure to high temperatures will increase natural discharge and shorten service life.
 - ... fully charge and then fully discharge the battery every 6 months when storing the battery pack over a long period time.
 - ... remove from charger or powered unit when not in use, as some machines use current even when switched off.



ATTENTION:

The battery you have purchased is recyclable. Please call 1-800-8-BATTERY for information on how to recycle this battery.

Recording Medium

- **Be sure to follow the guidelines below to prevent corruption or damage to your recorded data.**
 - Do not bend or drop the recording medium, or subject it to strong pressure, jolts or vibrations.
 - Do not splash the recording medium with water.
 - Do not use, replace, or store the recording medium in locations that are exposed to strong static electricity or electrical noise.
 - Do not turn off the camcorder power or remove the battery or AC adapter during shooting, playback, or when otherwise accessing the recording medium.
 - Do not bring the recording medium near objects that have a strong magnetic field or that emit strong electromagnetic waves.
 - Do not store the recording medium in locations with high temperature or high humidity.
 - Do not touch the metal parts.

LCD Monitor

- **To prevent damage to the LCD monitor, DO NOT**
 - ... push it strongly or apply any shocks.
 - ... place the camcorder with LCD monitor on the bottom.
- **To prolong service life**
 - ... avoid rubbing it with coarse cloth.

Main Unit

● For safety, DO NOT

- ... open the camcorder's chassis.
- ... disassemble or modify the unit.
- ... allow inflammables, water or metallic objects to enter the unit.
- ... remove the battery pack or disconnect the power supply while the power is on.
- ... leave the battery pack attached when the camcorder is not in use.
- ... place naked flame sources, such as lighted candles, on the apparatus.
- ... expose the apparatus to dripping or splashing.
- ... leave dust or metal objects adhered to the power plug or an AC wall outlet.
- ... insert any objects in the camcorder.

● Avoid using the unit

- ... in places subject to excessive humidity or dust.
- ... in places subject to soot or steam such as near a cooking stove.
- ... near appliances generating strong magnetic or electric fields (speakers, broadcasting antennas, etc.).
- ... in places subject to extremely high (over 40°C) or extremely low (under 0°C) temperatures.

● DO NOT leave the unit

- ... in places of over 50°C.
- ... in places where humidity is extremely low (below 35%) or extremely high (above 80%).
- ... in direct sunlight.
- ... in a closed car in summer.
- ... near a heater.
- ... in high places such as on a TV. Leaving the unit in high places while a cable is connected may result in a malfunction if the cable is caught and the unit falls onto the floor.

● To protect the unit, DO NOT

- ... allow it to become wet.
- ... drop the unit or strike it against hard objects.
- ... subject it to shock or excessive vibration during transportation.
- ... keep the lens directed at extremely bright objects for long periods.
- ... expose the lens to direct sunlight.
- ... swing it excessively when using the hand strap.
- ... swing the soft camcorder case excessively when the camcorder is inside it.

● To prevent the unit from dropping,

- Fasten the grip belt securely.
 - When using the camcorder with a tripod, attach the camcorder to the tripod securely.
- If the camcorder drops, you may be injured and the camcorder may be damaged. When a child uses the unit, there must be parental guidance.

Declaration of Conformity

Model Number: GZ-MS130U

Trade Name: JVC

Responsible party: JVC AMERICAS CORP.

Address: 1700 Valley Road Wayne, N. J. 07470

Telephone Number: 973-317-5000

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not approved by JVC could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Reorient or relocate the receiving antenna. Increase the separation between the equipment and receiver. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. Consult the dealer or an experienced radio/TV technician for help.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Terms

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